Notetaking Accommodations and Technology: The Basics

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Notetaking accommodations are an increasingly important topic that require thoughtful discussion, but we often ignore it so that we may focus on seemingly riskier and more challenging issues. It is difficult to determine whether students' concerns with notetaking are born out of disability or due to a lack of strategy and experience as a notetaker. Most likely, there is a combination of disability and strategy at play, and it makes it even more important that disability services professionals work to ensure that students with disabilities utilize effective accommodations and strategies to improve access. That should include not only critically deciding what types of accommodation are the right fit, but also providing some coaching on how to best use those accommodations with other notetaking strategies. This resource is intended to help disability services professionals work with a more deliberate understanding of accommodations, strategies, and tools.

Accommodations

It seems inappropriate to jump into notetaking strategies or tools without first considering the role of accommodations. First, any accommodations shared with students and faculty should be explicit and clear. Notetaking accommodations frequently use vague or ambiguous language that leaves the work of problem solving the implementation up to faculty and students. That may allow students and faculty to be creative, but it also places an additional burden on them to figure out the appropriate solution. Also, remember that passing this task on to faculty does not remove the disability services office responsibility to provide oversight of the accommodation process, which means ensuring that students actually receive the access and accommodations they need. Instead, I suggest that accommodations should be written explicitly and clearly, and without combining multiple options into a single statement. For instance, many schools use language such as "copies of professor's notes," but that is not obvious what type of notes that entails. If it is personal notes, then those are not something you can require. If it refers to PowerPoint slides or other lecture notes shared in class, then that is much clearer. Similarly, some offices combine options. For instance, my office previously instructed faculty to provide copies of lecture notes and/or identify a peer notetaker. That left a lot of decision-making up to the faculty and made it unclear for students on what they should expect. Instead, we have replaced that single accommodation with two clear accommodations, which also allows our team to determine if students need one or both of those accommodations.

Accommodation Fit and Strategies

Next, it is important to consider which accommodations and strategies are appropriate for each student. Even though notetaking accommodations are common practices, they should still be considered on an individualized basis through the interactive process. Common notetaking accommodations include the use of a peer notetaker (paid or volunteer), copies of PowerPoints and lecture materials, recording lecture audio, use of technology (laptop, tablet, smartpen, etc.), and photos of the board. Like any accommodation, it is important to match up student need with the right approach.

The accommodation process should only supplement the amount of notes necessary for access because notetaking is a critical part of the learning process, and the method used to take notes can influence retention. More specifically, research shows that handwritten notes are correlated with better retention, but it is unclear why. It could be the physical process of writing, but it could also be that handwriting notes requires people to synthesize information in order to paraphrase, use shorthand, and make decisions regarding what they write and don't write. Whether handwriting or typing, students should begin trying to synthesize and paraphrasing their notes. Strategies and accommodations that give students access to audio recordings should give them security to take chances on these steps and allow them to make mistakes or fall behind; recordings also allow students to choose when they should pause their notetaking so they can take a moment to just listen. They can always go back to the recording and capture the pertinent details after class. It is also important to share this information with students so they understand *WHY* these accommodations and strategies are effective. The *why* component creates buy-in from students and motivates them to try to make these options work.

Interactive Process

The first step of the interactive process is to begin by asking students about their challenges as a notetaker. Often, students report that they type because they cannot write fast enough to get every single word of lecture down. Alternatively, they may explain that they cannot keep up with writing down lecture, PowerPoints/other board work, and pay attention at the same time. Instead, they often do their best to transcribe every word without actually listening, or they fully pay attention and take little to no notes. The right option should be somewhere in the middle so that students have the opportunity to synthesize the information and capture information most important for their use later. Armed with this information, it is now possible to figure out what accommodations are appropriate.

Supplementary Accommodations (Independent Accommodations)

Typically, it seems recording lecture audio makes it possible for students to have access to the information and allows them to take chances on improving their notetaking. The option to record audio takes away pressure to hear and write every word because they can go back to the information they missed later. If there is also a difficulty with writing verbal lecture and things displayed on the board, then students may require copies of PowerPoints and lecture materials or take photos of the board as needed to free up time and ability to process the information and write only the necessary notes. In either case, the students have access to the information at a later time to fill in any gaps in their own notes, but they have to capture their own notes for those to be meaningful. Knowing the recording will allow students to fill in gaps, students can actually begin paraphrasing and using shorthand to write down what is important for their needs instead of writing every word. That freedom can also create confidence and remove some of the anxiety of participating in class.

Peer Notetakers (Dependent Accommodations)

The other common accommodation for notetaking is the use of peer notetakers. This guide is not designed to address best practices for implementing peer notetaker systems because that varies widely with campus culture and context. Instead, this section is focused on the overuse of peer notetakers. There will always be students who require someone else's notes to access class information, but I argue that it should only be utilized when a student cannot take notes for themselves. For instance, a student that cannot physically write or type notes, a student who is watching an interpreter during the entire class, or maybe a student with an auditory processing disorder may truly need a peer notetaker of some

type to ensure they have notes to study from later. However, it seems we often assign this accommodation because it is easier than explaining how to use other options or because it is easier than arguing with an instructor to share their PowerPoints. Still sometimes students argue they *NEED* the accommodation and we did not ask enough questions to determine if that was because they cannot take notes or because the student was uncomfortable with the challenge of being an independent notetaker.

Ultimately, the overuse of a peer notetaker accommodation is an easy mistake we all have made. I think the best method to guard against this is to be sure to engage in the interactive process to determine whether the student is capable of taking independent notes and what accommodations or strategies can supplement that process. If they do require accommodations that are more dependent in nature, it should be clear why it is necessary. Another question to ask is whether the choice is truly an accommodation for the student, or if it was chosen to accommodate an instructor's preferences or fears related to notetaking accommodations.

Tools

There is a wide variety of tools out there for notetaking. Most software and technology focuses on organization, recording audio, or both. There is no exhaustive or definitive list of options either because technology and software evolve so rapidly. Instead, I will share a few common options that have typically been successful or discussed among the profession. Importantly, I think it is important to understand the problem a tool solves more than knowing the tools. As someone in my office said recently, "When you focus on the tool rather than the problem you are trying to solve, you have already missed the point."

Microsoft OneNote (Free: Windows, Mac, Mobile)

Increasingly, students prefer to type their notes and organize them electronically. Microsoft OneNote is a free tool that works across platforms (Windows, Mac, and mobile devices/tablets). It allows students to type their notes, keep them organized like a traditional notebook, import other files like handouts or PowerPoints, and it has a recording feature that simultaneously syncs lecture audio with typed notes like a smart pen. The best thing about it is that most students already have it on their devices and students can use it even if they do not want to record audio. OneNote may be one of the most intuitive apps for managing the organization of notes during a single semester, and across an academic career.

Other Software/Apps (Cost Varies Free to Paid: Windows, Mac, Mobile)

There are dozens of other apps for laptops and tablets assist in taking and organizing notes and separate apps that record audio. There are increasingly more that do both simultaneously. You can typically find them under productivity lists of app stores; common examples include OneNote, Evernote and Notability. Students are often telling me about seemingly random and obscure note apps they found on their own, too. The main question to ask students is whether the tool they found solves their concerns rather than focusing on if it is the app you knew about in advance.

Sonocent Audio Notetaker (Paid: Windows, Mac)

Another big named app in the field is Sonocent Audio Notetaker. Many people have adopted this software for their campus and many have positive things to say. Still, I am not sure that it is better than the free OneNote option. To be fair, the two companies have very different goals for how notes are

collected. Sonocent was designed to focus on the audio portion of lecture even though there are options to type supplemental notes and import handouts. In contrast, OneNote seems to be more of a traditional notetaking experience moved to a computer and with the option to sync recordings. I believe Sonocent does a better job at connecting with disability services offices, but many are still unaware of the free option students are already carrying around in their backpack. I also know that Sonocent has attempted to study improvement in grades after using their software, but it is not obvious if those improvements are due to their particular software, or if it is due to simply having some software intervention regardless of brand. Until there is a side-by-side study, it will be impossible to know.

Smartpens and Digital Recorders

The only other tools I will discuss are traditional digital recorders and smartpens. Livescribe smartpens have been the go-to device for recording in the field for some time. The pen is about as intuitive as a device can get, but the computer interface can be a little more challenging. There are two types of Livescribe smartpens, one uses a built-in microphone and storage and the other uses Bluetooth with a mobile device to capture audio. Both options work well for their intended use. There are some durability issues with the pen displays, but the company typically seems willing to help resolve those defects. There are other smartpen brands on the market, but they do not seem to integrate recording and writing like the Livescribe brand.

Digital recorders and apps to record on smartphones or laptops are still useful tools as well. The best way to use these devices are to coach students to monitor the recording timer while taking notes. For instance, if a student realized they zoned out for the last few minutes of lecture, they can write the current time stamp into their notes to have an idea of where they need to go in the recording to find the information the missed. Similarly, students may realize they are falling behind or want to put the pen down to listen momentarily, and they can do this more easily if they write the current time on the recording so they can skip directly to it later. Without this guidance, many students record lecture, but never listen to it because they do not want to listen to the entire class all over again.

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